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10/657,261	09/09/2003	Soo Hwan Kim	P56945	4035

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Robert E. Bushnell
Suite 300
1522 K Street, N.W.
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EXAMINER

NGUYEN, KHAI MINH

ART UNIT	PAPER NUMBER
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2687

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,261

Applicant(s)

KIM ET AL.

Examiner

Khai M. Nguyen

Art Unit

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-7 and 20 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 8-19 is/are rejected.
- 7) ☒ Claim(s) 21-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/25/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's argument with respect to claim 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Information Disclosure Statement

2. The references listed in the Information Disclosure Statement filed on October 25, 2005 have been considered by the examiner (see attached PTO 1449 form or PTO/SB/08A and 08B forms).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 8-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell et al. (U.S.Pat-6807185) in view of Takayama et al. (U.S.Pub-20020025810).

Regarding claim 1, Bell teaches a method for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system (abstract, col.8, lines 50-55), comprising the steps of:

when an access node coupled to a wireless private network makes a request for a call connection with another access node coupled to the wireless private network (abstract, col.9, line 46 to col.10, line 4, *selectively establishing a user information path over an information transport network between first and second endpoints of first and second private network*), carrying out a call connection between the access nodes (col.10, lines 5-24), providing a high-speed wireless data service for the access nodes, and carrying out a call connection release after completing the high-speed wireless data service (abstract, col.9, line 46 to col.10, line 24); and

Bell fails to specifically disclose updating state information of the access nodes according to the call connection and connection release between the access nodes. However, Takayama teaches all access points are operated synchronously, and monitor the beacon to mate with the hopping frequency of the neighboring access point, Takayama further teaches updating state information of the access nodes according to the call connection and connection release between the access nodes (fig.6-7, paragraph 0036, 0039, 0065). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use updating state information of the access nodes according to the call connection and connection release between the access nodes as taught by Takayama with Bell teaching in order to improve the system bandwidth, and preferably the mobile terminal is connected to the access point having a best communication situation.

Regarding claim 2, Bell teaches a method for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system (abstract, col.8, lines 50-55), comprising the steps of:

when an access node coupled to a wireless private network makes a request for a call connection with another access node coupled to the wireless private network (abstract, col.9, line 46 to col.10, line 4, *selectively establishing a user information path over an information transport network between first and second endpoints of first and second private network*), carrying out a call connection between the access nodes and providing a high-speed wireless data service for the access nodes (abstract, col.9, line 46 to col.10, line 24);

updating state information of the access nodes to busy state information (col.10, lines 5-24, col.16, lines 16-57);

when the high-speed wireless data service for the access nodes is completed, carrying out a call connection release (col.10, lines 5-24); and

Bell fails to specifically disclose updating the state information of the access nodes to idle state information according to the call connection release. However, Takayama teaches all access points are operated synchronously, and monitor the beacon to mate with the hopping frequency of the neighboring access point, Takayama further teaches updating the state information of the access nodes to idle state information according to the call connection release (fig.6-7, paragraph 0036, 0039, 0065). Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to use updating the state information of the access nodes to idle state information according to the call connection release as taught by Takayama with Bell teaching in order to improve the system bandwidth, and preferably the mobile terminal is connected to the access point having a best communication situation.

Regarding claim 8, Bell teaches a wireless data system (abstract, col.9, line 46 to col.10, line 24), comprising:

a first access node receiving a first network service (abstract);

a second access node receiving a second network service (abstract);

a private access network controller carrying out a call connection between the access nodes and to provide data service for the first and second access nodes (abstract) when the first access node makes a request for a call connection with the second access node coupled to the first network service and the private access network controller requesting the state information of the first and second access nodes to be updated (abstract, col.9, line 46 to col.10, line 24).

Bell fails to specifically disclose a first private access network transceiver system setting up a session when the first access node moves within the wireless service area of the first private access network transceiver, and a second private access network transceiver system setting up a session when the second access node moves within the wireless service area of the second private access network transceiver.

However, Takayama teach all access points are operated synchronously, and monitor the beacon to mate with the hopping frequency of the neighboring access point, Takayama further teach a first private access network transceiver system setting up a session when the first access node moves within the wireless service area of the first private access network transceiver (fig.6-7, paragraph 0018, 0036, 0039, 0065), and a second private access network transceiver system setting up a session when the second access node moves within the wireless service area of the second private access network transceiver (fig.6-7, paragraph 0018, 0036, 0039, 0065). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a first private access network transceiver system setting up a session when the first access node moves within the wireless service area of the first private access network transceiver, and a second private access network transceiver system setting up a session when the second access node moves within the wireless service area of the second private access network transceiver as taught by Takayama with Bell teaching in order to improve the system bandwidth, and preferably the mobile terminal is connected to the access point having a best communication situation.

Regarding claim 9, Bell and Takayama further teaches the system of claim 8, further comprising a data location register updating the state information of the access nodes to busy state information according to a state information update request (see Bell, col.10, lines 6-24, see Takayama, fig.6-7, paragraph 0036, 0039, 0065).

Regarding claim 10, Bell and Takayama further teaches the system of claim 9, with the private access network controller requesting that the state information of the access nodes be updated (see Bell, col.10, lines 6-24), and carrying out a call connection release between the access nodes when the data service for the access nodes is completed (see Bell, abstract, col.9, line 46 to col.10, line 24, see Takayama, fig.6-7, paragraph 0036, 0039, 0065).

Regarding claim 11, Bell and Takayama further teaches the system of claim 10, with the data location register updating the state information of the access nodes to idle state information according to another state information update request (see Bell, abstract, col.9, line 46 to col.10, line 24, see Takayama, fig.6-7, paragraph 0036, 0039, 0065).

Regarding claim 12, Bell and Takayama further teaches the system of claim 11, with the first network service being a wireless private network (see Bell, abstract).

Regarding claim 13, Bell and Takayama further teaches the system of claim 12, with the second network service being a public land mobile network (see Bell, abstract).

Regarding claim 14, Bell and Takayama further teaches the system of claim 12, with the second network service being a public network (see Bell, abstract).

Regarding claim 15, Bell and Takayama further teaches the system of claim 13, with the data location register storing the information associated with the first access node of the wireless private network equal to the information associated with the second access node of the public land mobile network (see Bell, abstract, col.9, line 46 to col.10, line 24, see Takayama, paragraph 0012).

Regarding claim 16, Bell and Takayama further teaches the system of claim 15, with the private access network controller and the data location register being configured to being based on an Internet protocol (see Bell, abstract, see Takayama,).

Regarding claim 17, Bell and Takayama further teaches the system of claim 16, with the private access network controller sending a request message indicating the state information of the originating access node and the terminating access node to be updated to busy state information (see Takayama, fig.4-7, 20B, abstract, col.37, lines 7-51) and the data location register searching for the subscriber information upon

receiving the state information update request and updating the access node state information to busy state information (see Bell, abstract, col.9, line 46 to col.10, line 24).

Regarding claim 18, Bell teaches computer-readable medium having computer-executable instructions for performing a method for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system (abstract, col.8, lines 50-55), comprising:

when an access node coupled to a wireless private network makes a request for a call connection with another access node coupled to the wireless private network (abstract, col.9, line 46 to col.10, line 4, *selectively establishing a user information path over an information transport network between first and second endpoints of first and second private network*), carrying out a call connection between the access nodes (col.10, lines 5-24), providing a high-speed wireless data service for the access nodes, and carrying out a call connection release after completing the high-speed wireless data service (abstract, col.9, line 46 to col.10, line 24); and

Bell fails to specifically disclose updating state information of the access nodes according to the call connection and connection release between the access nodes. However, Takayama teaches all access points are operated synchronously, and monitor the beacon to mate with the hopping frequency of the neighboring access point, Takayama further teaches updating state information of the access nodes according to the call connection and connection release between the access nodes (fig.6-7,

paragraph 0036, 0039, 0065). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use updating state information of the access nodes according to the call connection and connection release between the access nodes as taught by Takayama with Bell teaching in order to improve the system bandwidth, and preferably the mobile terminal is connected to the access point having a best communication situation.

Regarding claim 19, Bell teaches a computer-readable medium having computer-executable instructions for performing a method for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system (abstract, col.8, lines 50-55), comprising:

when an access node coupled to a wireless private network makes a request for a call connection with another access node coupled to the wireless private network (abstract, col.9, line 46 to col.10, line 4, *selectively establishing a user information path over an information transport network between first and second endpoints of first and second private network*), carrying out a call connection between the access nodes and providing a high-speed wireless data service for the access nodes (abstract, col.9, line 46 to col.10, line 24);

updating state information of the access nodes to busy state information (col.10, lines 5-24, col.16, lines 16-57);

when the high-speed wireless data service for the access nodes is completed, carrying out a call connection release (col.10, lines 5-24); and

Bell fails to specifically disclose updating the state information of the access nodes to idle state information according to the call connection release. However, Takayama teaches all access points are operated synchronously, and monitor the beacon to match with the hopping frequency of the neighboring access point, Takayama further teaches updating the state information of the access nodes to idle state information according to the call connection release (fig.6-7, paragraph 0036, 0039, 0065). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use updating the state information of the access nodes to idle state information according to the call connection release as taught by Takayama with Bell teaching in order to improve the system bandwidth, and preferably the mobile terminal is connected to the access point having a best communication situation.

Allowable Subject Matter

4. Claims 21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 3-7, 20 are allowed.

Regarding claim 3: The following is an examiner's statement of reasons for allowance: Prior art teaches a method for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system, comprising the steps of: when an access node coupled to a wireless private network makes a request for a call connection with another access node coupled to the wireless private network. However, the prior art fails to teaches allowing a private access network controller to carry out a call connection between the access nodes and to provide a high-speed wireless data service for the access nodes, allowing the private access network controller to request that state information of the access nodes be updated, allowing a data location register to update the state information of the access nodes to busy state information according to a state information update request, when the high-speed wireless data service for the access nodes is completed, carrying out a call connection release between the access nodes and allowing the private access network controller to request that the state information of the access nodes be updated, and allowing the data location register to update the state information of the access nodes to idle state information according to another state information update request.

Regarding claim 20: The following is an examiner's statement of reasons for allowance: Prior art teaches computer-readable medium having stored thereon a data structure for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system. However, the prior art fails to teaches a first field containing data representing when an access node coupled to a

wireless private network makes a request for a call connection with another access node coupled to the wireless private network, allowing a private access network controller to carry out a call connection between the access nodes and to provide a high-speed wireless data service for the access nodes, a second field containing data representing allowing the private access network controller to request that state information of the access nodes be updated, a third field containing data representing allowing a data location register to update the state information of the access nodes to busy state information according to a state information update request, a fourth field containing data representing when the high-speed wireless data service for the access nodes is completed, carrying out a call connection release between the access nodes and allowing the private access network controller to request that the state information of the access nodes be updated, and a fifth field containing data representing allowing the data location register to update the state information of the access nodes to idle state information according to another state information update request.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submission should be clearly labeled "Comments on Statement of Reasons for Allowance."

Citation of Pertinent Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lu et al. (U.S.Pat-5999813) discloses Overlay cellular communication system.

D' Arcy et al. (U.S.Pat-6687359) discloses Method for controlling a telephone call between two items of terminating equipment.

Ihara et al. (U.S.Pat-6366773) discloses Radio terminal operation data write method in private mobile communication system.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 571.272.7923. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571.272.7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khai Nguyen
AU: 2687

11/30/2005


12/12/05
LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER